Message

From: Vranka, Joe [vranka.joe@epa.gov]

Sent: 6/7/2017 6:38:01 PM

To: Murray, Bill [Murray.Bill@epa.gov]; Smidinger, Betsy [Smidinger.Betsy@epa.gov]; Stavnes, Sandra

[Stavnes.Sandra@epa.gov]

Subject: FW: Update - interview back on

Attachments: ResponsesButteArsenic 20170606.docx

FYI - talking points attached

From: Moler, Robert

Sent: Tuesday, June 06, 2017 4:29 PM **To:** Greene, Nikia < Greene.Nikia@epa.gov>

Cc: Vranka, Joe <vranka.joe@epa.gov>; Elsen, Henry <Elsen.Henry@epa.gov>; Griffin, Susan <Griffin.Susan@epa.gov>;

Mutter, Andrew <mutter.andrew@epa.gov>; Mylott, Richard <Mylott.Richard@epa.gov>

Subject: Update - interview back on

My bad. I misunderstood. We are on for the interview tomorrow. Sorry for any confusion.

To be clear, we WILL have the interview tomorrow with Susan Dunlap Wednesday June 7 at 1 pm.

I have told Susan Dunlap via phone. She will travel to Helena and meet us in our office.

Thanks. Feel free to razz me a little about the confusion.

Sent from my iPhone

On Jun 6, 2017, at 3:36 PM, Moler, Robert < Moler. Robert@epa.gov > wrote:

Heads up – I received a call from Andrew Mutter who asked us to hold off on the interview with Susan D. tomorrow per HQ request. I'll let you know when I learn more.

Robert Moler Community Involvement Coordinator EPA – Montana 406.457.5032

From: Greene, Nikia

Sent: Tuesday, June 06, 2017 12:35 PM **To:** Moler, Robert < Moler, Robert@epa.gov>

Cc: Vranka, Joe <vranka.joe@epa.gov>; Elsen, Henry <Elsen.Henry@epa.gov>; Griffin, Susan

<<u>Griffin.Susan@epa.gov</u>>

Subject: RE: questions on arsenic

Robert,

Attached is the final version. I did some more research on Q7. Thanks

Nikia Greene

Remedial Project Manager U.S. EPA, Region 8 (406)-457-5019

greene.nikia@epa.gov

From: Moler, Robert

Sent: Monday, June 05, 2017 2:31 PM **To:** Greene, Nikia < <u>Greene.Nikia@epa.gov</u>>

Cc: Vranka, Joe <vranka.joe@epa.gov>; Elsen, Henry <Elsen.Henry@epa.gov>; Griffin, Susan

<Griffin.Susan@epa.gov>

Subject: FW: questions on arsenic

Nikia,

We are cleared for the interview with Susan Dunlap on Wed @ 1 pm regarding arsenic in Butte. Rich Mylott used Henry's edited version for HQ approval. We can still make tweaks and changes in prep for the interview. Let me know if we need to make any substantial change so I can send it up if needed.

Thanks!

Robert Moler Community Involvement Coordinator EPA – Montana 406.457.5032

From: Mylott, Richard

Sent: Monday, June 05, 2017 2:27 PM

To: Moler, Robert < Moler.Robert@epa.gov >
Cc: Mutter, Andrew < mutter.andrew@epa.gov >

Subject: FW: questions on arsenic

Good to go, per NG.

From: Elsen, Henry

Sent: Thursday, June 1, 2017 3:05 PM

To: Greene, Nikia <<u>Greene.Nikia@epa.gov</u>>; Griffin, Susan <<u>Griffin.Susan@epa.gov</u>>; Moler, Robert <<u>Moler.Robert@epa.gov</u>>; Mylott, Richard <<u>Mylott.Richard@epa.gov</u>>; Vranka, Joe

<vranka.joe@epa.gov>

Cc: Mutter, Andrew < mutter.andrew@epa.gov>

Subject: RE: questions on arsenic

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Do Not Release

Nikia,

I have some edits that are both editorial and substantive, and a few comments for you to consider. They are shown in the attached document. Let me know if you have questions.

Henry Elsen, Attorney Legal Enforcement Program U.S. EPA Region 8 Montana Office Federal Office Building, Suite 3200 10 W. 15th St. Helena, MT 59626 406 457-5030

From: Greene, Nikia

Sent: Thursday, June 01, 2017 12:49 PM

To: Griffin, Susan < Griffin.Susan@epa.gov >; Moler, Robert < Moler.Robert@epa.gov >; Mylott, Richard

<Mylott.Richard@epa.gov>; Vranka, Joe <vranka.joe@epa.gov>

Cc: Mutter, Andrew <mutter.andrew@epa.gov>; Elsen, Henry <Elsen.Henry@epa.gov>

Subject: RE: questions on arsenic

All,

Attached are draft responses to Ms. Dunlap's questions. I have added Susan Griffin's responses to the document. Thanks Susan.

Nikia Greene Remedial Project Manager U.S. EPA, Region 8 (406)-457-5019 greene.nikia@epa.gov

From: Griffin, Susan

Sent: Monday, May 22, 2017 10:30 AM

To: Moler, Robert < Moler.Robert@epa.gov >; Mylott, Richard < Mylott.Richard@epa.gov >; Vranka, Joe

<vranka.joe@epa.gov>; Greene, Nikia <Greene.Nikia@epa.gov>

Cc: Mutter, Andrew < mutter.andrew@epa.gov >

Subject: RE: questions on arsenic

See responses below.

From: Moler, Robert

Sent: Thursday, May 18, 2017 2:21 PM

To: Griffin, Susan < Griffin, Susan@epa.gov >; Mylott, Richard < Mylott, Richard@epa.gov >; Vranka, Joe

<vranka.joe@epa.gov>; Greene, Nikia <Greene.Nikia@epa.gov>

Cc: Mutter, Andrew <mutter.andrew@epa.gov>

Subject: FW: questions on arsenic

Including Susan Griffin on these questions. Interview is Tue, May 30 (day after Memorial Day holiday) at 1 pm in the Clark Fork Room MT office. Here is the dial in numbers (I've included the questions and call in numbers in the calendar invite as well).

Call in number: 1.866.299.9141 Participant Passcode: 55334897#

Please take a look and send me any response points you feel appropriate. I will compile and edit and follow up with you soon to finalize. Afterwards I'll work with Rich and coordinate with HQ for the green light. Unless there is an objection, I don't plan to share our written response with Susan D. in advance but rather use them as a script to prepare for the interview.

Thanks in advance for your help.

Robert Moler Community Involvement Coordinator EPA – Montana 406.457.5032

From: Susan Dunlap [mailto:Susan.Dunlap@mtstandard.com]

Sent: Thursday, May 18, 2017 12:39 PM
To: Moler, Robert < Moler. Robert @epa.gov>

Cc: Mylott, Richard < Mylott. Richard @epa.gov >; Vranka, Joe < vranka.joe @epa.gov >; Greene, Nikia

<<u>Greene.Nikia@epa.gov</u>> **Subject:** questions on arsenic

Hi Robert,

So we're on for Tuesday the 30th.

Arsenic:

Where does EPA think the arsenic in Butte comes from?

Does EPA have any concerns about arsenic set at 250 ppm in Butte?

EPA: We feel that the cleanup levels set for arsenic in Butte are protective for both children and adults living in the community.

Is EPA's risk assessment for the 250 ppm of arsenic in Butte based on the same studies as Anaconda's 250 ppm, which I understand are based on a test giving a pill of arsenic laden dirt to 3 monkeys and another test performed on New Zealand white rabbits?

EPA: The cleanup level for arsenic in Butte was derived using EPA's Risk Assessment Guidance for Superfund process. One of the primary site-specific exposure assumptions in that process was the bioavailability of arsenic from soil. The bioavailability factor for arsenic in Butte soils was originally taken from the bioavailability of arsenic in Anaconda. Based on the comparisons of mineralogy at the two sites, it was shown that the arsenic in soil in Anaconda would be more soluble (and hence more bioavailable) than the soils in Butte. Therefore, use of the arsenic bioavailability factors from Anaconda (18% for soil, 25% for indoor dust) would be appropriate and protective for Butte. This mineralogical comparison is documented in both the April 1997 Baseline Human Health Risk Assessment for Arsenic and the July 1996 PTI report "Arsenic Mineralogy in Butte Soils and Comparison to Anaconda Soils". In December of 1997 and then again in March 2003, Butte soils were tested for bioavailability in the juvenile swine model (the animal model recommended by the USEPA). In 2003, the Butte soils were also tested in the in vitro assay recommended by USEPA in lieu of animal studies for bioaccessibility. In both of the swine studies, the bioavailability of arsenic in Butte soils ranged from 10-22%. The bioaccessibility of arsenic from Butte in the in vitro study ranged from 9-13%. These site-specific studies would suggest that the bioavailability factors selected for the 1997 human health risk assessment and the derivation of the cleanup levels for Butte are adequately protective.

Was Butte's arsenic action level established at the same time as Anaconda's?

If EPA assumes the arsenic in Butte came from former Butte smelters from the late 1800s/early 1900s, just as EPA assumes that is the source of Butte's lead, why is Butte's action level for lead so much higher than Anaconda's lead action level but Butte has the same action level on arsenic as Anaconda?

EPA: The cleanup levels for lead and arsenic in Butte and Anaconda were derived using standard EPA Risk Assessment Guidances, equations and exposure assumptions. Again, one of the primary site-specific exposure assumptions was the bioavailability of lead or arsenic from soil. Whereas, the bioavailability of arsenic was similar between the two sites (see response above), the bioavailability of lead was not. The bioavailability of lead was approximately 10% in Butte and 30% in Anaconda. Therefore the cleanup level for lead in Anaconda was 3X lower than that in Butte.

I know lead is the "driver" in Butte but have there been any studies on arsenic in children's urine in Butte?

EPA: During the assessment of Walkerville (circa 2000), St. James Hospital, Butte Silver Bow Health Department and ATSDR collaborated to test for lead, arsenic and mercury in Butte residents. All results were within medical reference ranges. Butte Silver Bow County Health also offers arsenic and mercury biomonitoring under the RMAP program since 2010. My understanding is that no elevated results have been observed.

When EPA studied arsenic in children's urine in Anaconda in 1975, did EPA check on Butte kids for arsenic or only Anaconda kids?

EPA: See response above.

I understand that the RMAP program predominantly finds lead in the soil, not so much arsenic outside of the R/R TCRA, which has been addressed already in BPSOU. In BPSOU, arsenic is mostly found in the attics. Do you agree with that?

When did EPA do the R/R TCRA? What years did the actual work take place?

I understand the county cleaned up homes around the railroads for arsenic up to the BPSOU boundary and that RMAP has found arsenic in homes along the R/R in Rocker. What about homes beyond that? Since West Side Soils seems put on hold indefinitely, when do homes beyond Rocker along the r/r get addressed?

Has any action been taken for lead or arsenic exposure at Ramsay School?

Thanks, Susan

Susan Dunlap

Natural Resources Reporter
Montana Standard | Box 627 | 25 W. Granite St. | Butte MT 59703
406-496-5572
406-565-3051 (cell)
susan.dunlap@mtstandard.com
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